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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/542,010

04/24/2006

Jun Fujita

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EXAMINER

GUGLIOTTA, NICOLE T

ART UNIT

PAPER NUMBER

1794

MAIL DATE

DELIVERY MODE

12/09/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/542,010	Applicant(s) FUJITA ET AL.	
	Examiner NICOLE T. GUGLIOTTA	Art Unit 1794	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 - 9 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1 - 9 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. ____. |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

2. Claims 1, 4 - 9 are rejected under 35 U.S.C. 102(a) as being anticipated by Harada et al (US 2003/0138596 A1).

3. In regard to claims 1, 7 - 9, Harada et al. disclose a honeycomb structure comprising a plurality of honeycomb segments with adhesion surfaces for a heat-conductive member (corresponds to applicant's "protrusion portion") which is not in contact with the opposing honeycomb segment (corresponds to applicant's "other first and second adhesion surfaces") (Figure 3). The heat-conductive member (9) is not in contact with honeycomb segment 4 and the heat-conductive member (8) is not in contact with honeycomb segment (5).

4. In regard to claim 2, Harada et al. disclose the heat-conductive member composed of the same material as that of the dried honeycomb segment (Section [0101]). The dried honeycomb segments are composed of a ceramic powder (corresponds to applicant's "inorganic materials") and binder, for example cellulose (corresponds to applicant's "organic materials") (Sections [0080] and [0081]).

5. In regard to claims 4 - 6, Harada et al. disclose the heat-conductive member was press-bonded to the slurry-coated portion of the honeycomb segment, dried, and placed in contact with an adjacent honeycomb segment to create a unified body (Sections [0100] - [0101]).

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 3 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Harada et al., in view of Norihiko (JP 2002-102627, English equivalent provided by applicant) or Fujita et al. (WO 03/31371 A1 (Examiner has used US 2004/0108056 A1 as an English equivalent until a translation is attained)).

8. In regard to claims 3 and 7, Harada et al. are silent in regard to thickness of the heat-conducting members. Norihiko also discloses a ceramic structure comprising a plurality of ceramic members banded together with two or more spacing materials (13) (corresponds to applicant's "protrusion portions" and Harada's "heat-conductive member" (Section [0020])). Norihiko teaches when the spacing material is cylindrical, the desirable thickness is 0.8 - 1.2 mm. If the thickness is too small, predetermined

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spacing can not be secured and a chip may occur. If the thickness is too large, a thicker glue line would be required, which would lead to a reduced thermal conductivity between the ceramic members (Section [0024]). The thickness of the glue line is 0.6 – 1.2 mm or 0.3 – 1.6 (machine translation) (Section [0071]). In regard to claim 3, Fujita et al. also disclose a honeycomb structural body comprising a plurality of honeycomb segments and spacers between said segments (Section [0007]). Tables 1 – 3 of Fujita et al. disclose the thickness of the adhesive layers with the spacers to range from 0.78 – 1.01 mm. The thicknesses of the spacers are preferably 0.1 to 3.0 mm (Section [0007]). When the thickness of the spacer is too large a thick adhesive layer is required, which leads to large pressure loss of the honeycomb structure. When the thickness of the spacer is too small, there would be no purpose to having the spacer (Section [0027]). Fujita et al. disclose a thickness of the adhesive layer to be 0.1 – 3.0 mm. Too large a thickness results in large pressure loss when an exhaust gas passes through and too small a thickness may not allow the adhesive to be adhesive enough to join the segments with the protrusion (Section [0030]).

9. It would have been obvious to one of ordinary skill in the art at the time of the invention to have a predetermined thickness for Harada's heat-conductive members, as Norihiko and Fujita et al. both teach too large a thickness would lead to reduced thermal conductivity and pressure loss, and too small an element would lead to chipping. In addition, it would have been obvious to one of ordinary skill in the art at the time of the invention to have a predetermined thickness for the glue line adhering Harada's heat-conductive members to the honeycomb segments, as Norihiko and Fujita et al. both

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teach too thick of a glue line would lead to reduced thermal conductivity and reduced pressure loss, and too thin a glue line would reduce the adhesiveness of the elements to the segments too much to remain joined.

10.

Response to Amendment

11. Amendments made by applicant have rendered the obvious-type double patenting rejections of the previous office action moot. Applicant's amendments have also overcome the previous art rejections of record.

Response to Arguments

12. Applicant's arguments with respect to claims 1 - 9 have been considered but are moot in view of the new ground(s) of rejection which have been necessitated by the amendment to the claims, specifically "the first plurality of protrusion portions are not in contact with the other of the first and second adhesion surfaces".

Conclusion

13. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

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A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to NICOLE T. GUGLIOTTA whose telephone number is (571)270-1552. The examiner can normally be reached on M - Th 8:30 - 6 p.m., & every other Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Carol Chaney can be reached on 571-272-1284. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

NICOLE T. GUGLIOTTA
Examiner
Art Unit 1794

/Jennifer McNeil/

Supervisory Patent Examiner, Art Unit 1794